

# **ENTOMOLOGY**

## **Contest Overview**

Insects are extremely important animals; some are very destructive and many are beneficial. Insects may damage or kill cultivated plants, they may damage or contaminate stored foods and other products, and they may attack man or animals and bite, sting, or act as vectors of disease. Insects can be beneficial for pollination of crops, parasites and predators of destructive species. They are also important as food for birds, fish and other animals, and provide products of commercial value such as honey, wax, silk, and shellac. It is important that FFA members be able to recognize some of the more important beneficial and destructive species of insects and their relatives. In addition to proper identification of the pest, it is important to be aware of control strategies and know how to properly apply pesticides safely should chemical control be required.

## **Contest Objectives**

Students participating in this contest should be able to:

1. Identify many beneficial and destructive insects and their close relatives.
2. Identify the class and order, type of metamorphosis, and type of mouthparts.
3. Understand common pest control strategies.
4. Understand how to apply pesticides safely.

## **Contest Format and Scoring**

Each team will consist of four (4) members. Each team member must participate in all phases of the contest.

Part I. Insect Identification. There will be forty (40) adult specimens chosen from the six insect relatives and one hundred (100) insect groups on the Insect Identification List. The contestant will give the name of the specimens; the order; the type of metamorphosis; and the type of mouthparts. The contest will be scored as follows for each specimen:

|                               |          |
|-------------------------------|----------|
| Correct Name                  | 2 points |
| Correct Order                 | 2 points |
| Correct Type of Metamorphosis | 2 points |
| Correct Type of Mouthparts    | 2 points |

A maximum of 320 points for identification is possible.

Part II. Pesticide Application and Control Strategies. The Pesticide Application Quiz will consist of 75 multiple choice questions taken directly from the study manual, APPLYING PESTICIDES CORRECTLY and the Entomology Unit from IML. Each question will be worth two points for a maximum of 150 points for the Pesticide Application Quiz.

### **Contest Rules**

1. Contestant will be allowed 45 seconds to identify each insect and 50 minutes to complete the pesticide application quiz.
2. Written Materials: All written materials will be furnished for the contest. Contestants should provide pencils and clean clipboards. Scratch paper will be provided. No calculators allowed.
3. Contestants will not be able to touch or handle insect specimens. Magnifying glasses will be allowed but will not be provided.
4. All contestants will be given a number by which they will be identified throughout the contest.
5. All contestants must be prompt at their stations throughout the contest. No provisions will be made for tardiness and will most certainly cause late contestants to lose contest points.
6. Contestants will not communicate with each other while the contest is in progress.
7. Contest booklet will not be returned to contestants after tests.
8. Official FFA Entomology Insect Identification List will be provided to each contestant.
9. Form 50 (refer to following pages) will be used for scoring I.D.

### **References**

A Field Guide to the Insects of America North of Mexico by Donald J. Borror and Richard E. White, 1970. Houghton Mifflin Company, Boston (Peterson Field Guide Series).

Applying Pesticides Correctly (MX328-revised 01/97). (a.k.a. the "White" book). U.S. Department of Agriculture and U.S. Environmental Protection Agency (a guide for private and commercial applicators).

Color slides. A complete set of slides (99) showing all the insects to be identified in the Entomology Contest.

Entomology Unit for Ag. Science II (Instructor and Student Reference).

Above materials available from:

Instructional Materials Laboratory  
2316 Industrial Drive  
University of Missouri  
Columbia, MO 65202

Commercial Pesticide Applicator's Handbook.

Golden Guides - Published by Golden Press, New York. Excellent, inexpensive, color guides to common (and not so common) insects and relatives. Golden Guides are approximately \$3.95 each.

- a. Insects - Zim and Cottam, 160 pages, 1956, ISBN 0-307-24492-X.
- b. Butterflies and Moths - Mitchell and Zim, 160 pages, ISBN 0-307-24492-X.

Destructive and Useful Insects, by Metcalf, Flint, & Metcalf, 1979, McGraw-Hill Publishers, New York, \$69.95 (1990, approx.).

Audubon Society Field Guides, published by A.A. Knopf, New York. Excellent color photographs of insects and relatives; accompanying text gives distribution, biology, etc., \$15.95 each, in field finding.

- a. Field Guide to North American Insects and Spiders, Milne and Milne, 1980, 989 pp., ISBN 0-394-50763-0.
- b. Field Guide to North American Butterflies, Pyle, 1981, 924 pp., ISBN 0-394-51914-0.

Optional: Peterson Field Guide Series. Published by Houghton-Mifflin, Boston. Approximate Cost: \$14.95 (1990).

- a. A Field Guide to the Beetles (#29), White, 1983, 368 pp., ISBN 0-395-33953-7.
- b. A Field Guide to the Moths of Eastern North America (#30), Covell, 1984, ISBN 0-395-36100-1.

Optional: How to Know Series, published by W.C. Brown, Dubuque, Iowa. A pictured key nature series which includes keys to insects and relatives. Approximate cost: \$17.00 (1990).

- a. How to Know the Insects. Bland-Jacques, 3rd ed. ISBN 0-697-04757-1.
- b. How to Know the Immature Insects. Chu, 234 pp.
- c. How to Know the Mites and Ticks. McDaniel, 335 pp.
- d. How to Know the Grasshoppers, Cockroaches, and Their Allies, Helfer.

## FFA INSECT CHECKLIST

|     | <b><u>Insect</u></b>    | <b><u>Order</u></b> | <b><u>Metamorphosis</u></b> | <b><u>Mouth Parts</u></b> |
|-----|-------------------------|---------------------|-----------------------------|---------------------------|
| 1.  | Alfalfa Butterfly       | Lepidoptera         | Complete                    | Sucking                   |
| 2.  | Alfalfa Weevil          | Coleoptera          | Complete                    | Chewing                   |
| 3.  | American Cockroach      | Orthoptera          | Simple                      | Chewing                   |
| 4.  | Ant                     | Hymenoptera         | Complete                    | Chewing                   |
| 5.  | Assassin Bug            | Hemiptera           | Simple                      | Sucking                   |
| 6.  | Bagworm Larvae (in bag) | Lepidoptera         | Complete                    | Chewing                   |
| 7.  | Bald-Faced Hornet       | Hymenoptera         | Complete                    | Chewing                   |
| 8.  | Bean Leaf Beetle        | Coleoptera          | Complete                    | Chewing                   |
| 9.  | Black Cutworm Moth      | Lepidoptera         | Complete                    | Sucking                   |
| 10. | Blister Beetle          | Coleoptera          | Complete                    | Chewing                   |
| 11. | Boxelder Bug            | Hemiptera           | Simple                      | Sucking                   |
| 12. | Brown Stink Bug         | Hemiptera           | Simple                      | Sucking                   |
| 13. | Buckeye Butterfly       | Lepidoptera         | Complete                    | Sucking                   |
| 14. | Bumble Bee              | Hymenoptera         | Complete                    | Chewing                   |
| 15. | Cabbage Butterfly       | Lepidoptera         | Complete                    | Sucking                   |
| 16. | Cabbage Looper          | Lepidoptera         | Complete                    | Sucking                   |
| 17. | Caddisfly               | Trichoptera         | Complete                    | Chewing                   |
| 18. | Camel Cricket           | Orthoptera          | Simple                      | Chewing                   |
| 19. | Carpenter Bee           | Hymenoptera         | Complete                    | Chewing                   |
| 20. | Carpet Beetle           | Coleoptera          | Complete                    | Chewing                   |
| 21. | Carrion Beetle          | Coleoptera          | Complete                    | Chewing                   |
| 22. | Chinch Bug              | Hemiptera           | Simple                      | Sucking                   |
| 23. | Cicada                  | Homoptera           | Simple                      | Sucking                   |
| 24. | Click Beetle            | Coleoptera          | Complete                    | Chewing                   |
| 25. | Codling Moth            | Lepidoptera         | Complete                    | Sucking                   |
| 26. | Colorado Potato Beetle  | Coleoptera          | Complete                    | Chewing                   |
| 27. | Corn Earworm Moth       | Lepidoptera         | Complete                    | Sucking                   |
| 28. | Damsel Bug              | Hemiptera           | Simple                      | Sucking                   |
| 29. | Damselfly               | Odonata             | Simple                      | Chewing                   |

|     | <b><u>Insect</u></b>                    | <b><u>Order</u></b> | <b><u>Metamorphosis</u></b> | <b><u>Mouth Parts</u></b> |
|-----|---|---------------------|-----------------------------|---------------------------|
| 30. | Differential Grasshopper (short-horned) | Orthoptera          | Simple                      | Chewing                   |
| 31. | Dobsonfly                               | Neuroptera          | Complete                    | Chewing                   |
| 32. | Dragonfly                               | Odonata             | Simple                      | Chewing                   |
| 33. | Earwig                                  | Dermaptera          | Simple                      | Chewing                   |
| 34. | Elm Leaf Beetle                         | Coleoptera          | Complete                    | Chewing                   |
| 35. | European Corn Borer moth                | Lepidoptera         | Complete                    | Sucking                   |
| 36. | Field Cricket                           | Orthoptera          | Simple                      | Chewing                   |
| 37. | Flea                                    | Siphonaptera        | Complete                    | Sucking                   |
| 38. | Flea Beetle                             | Coleoptera          | Complete                    | Chewing                   |
| 39. | Flour Beetle                            | Coleoptera          | Complete                    | Chewing                   |
| 40. | Forage Looper Moth                      | Lepidoptera         | Complete                    | Sucking                   |
| 41. | German Cockroach                        | Orthoptera          | Simple                      | Chewing                   |
| 42. | Giant Water Bug                         | Hemiptera           | Simple                      | Sucking                   |
| 43. | Green Bottle Fly                        | Diptera             | Complete                    | Sucking                   |
| 44. | Green June Beetle                       | Coleoptera          | Complete                    | Chewing                   |
| 45. | Green Lacewing                          | Neuroptera          | Complete                    | Chewing                   |
| 46. | Green Stink Bug                         | Hemiptera           | Simple                      | Sucking                   |
| 47. | Ground Beetle                           | Coleoptera          | Complete                    | Chewing                   |
| 48. | Harlequin Bug                           | Hemiptera           | Simple                      | Sucking                   |
| 49. | Hog Louse                               | Anoplura            | Simple                      | Sucking                   |
| 50. | Honey Bee                               | Hymenoptera         | Complete                    | Chewing                   |
| 51. | Horntail                                | Hymenoptera         | Complete                    | Chewing                   |
| 52. | Horse Fly                               | Diptera             | Complete                    | Sucking                   |
| 53. | House Fly                               | Diptera             | Complete                    | Sucking                   |
| 54. | Ichneumon Wasp                          | Hymenoptera         | Complete                    | Chewing                   |
| 55. | Indian Meal Moth                        | Lepidoptera         | Complete                    | Sucking                   |
| 56. | Japanese Beetle                         | Coleoptera          | Complete                    | Chewing                   |
| 57. | Lace Bug                                | Hemiptera           | Simple                      | Sucking                   |
| 58. | Ladybird Beetle                         | Coleoptera          | Complete                    | Chewing                   |

|     | <b><u>Insect</u></b>                                | <b><u>Order</u></b> | <b><u>Metamorphosis</u></b> | <b><u>Mouth Parts</u></b> |
|-----|---|---------------------|-----------------------------|---------------------------|
| 59. | Leafhopper  | Homoptera           | Simple                      | Sucking                   |
| 60. | Lightningbug (Firefly)                              | Coleoptera          | Complete                    | Chewing                   |
| 61. | Long-Horned Beetle                                  | Coleoptera          | Complete                    | Chewing                   |
| 62. | Long-Horned Grasshopper                             | Orthoptera          | Simple                      | Chewing                   |
| 63. | Luna Moth   | Lepidoptera         | Complete                    | Sucking                   |
| 64. | Mayfly  | Ephemeroptera       | Simple                      | Chewing                   |
| 65. | Mealybug  | Homoptera           | Simple                      | Sucking                   |
| 66. | Metallic Wood-Boring Beetle                         | Coleoptera          | Complete                    | Chewing                   |
| 67. | Mexican Bean Beetle                                 | Coleoptera          | Complete                    | Chewing                   |
| 68. | Minute Pirate Bug                                   | Hemiptera           | Simple                      | Sucking                   |
| 69. | Mole Cricket  | Orthoptera          | Simple                      | Chewing                   |
| 70. | Monarch Butterfly                                   | Lepidoptera         | Complete                    | Sucking                   |
| 71. | Mosquito  | Diptera             | Complete                    | Sucking                   |
| 72. | Moth Fly  | Diptera             | Complete                    | Sucking                   |
| 73. | Mud Dauber Wasp                                     | Hymenoptera         | Complete                    | Chewing                   |
| 74. | Northern Corn Rootworm                              | Coleoptera          | Complete                    | Chewing                   |
| 75. | Oriental Cockroach                                  | Orthoptera          | Simple                      | Chewing                   |
| 76. | Pea Aphid   | Homoptera           | Simple                      | Sucking                   |
| 77. | Peachtree Borer Moth                                | Lepidoptera         | Complete                    | Sucking                   |
| 78. | Praying Mantid                                      | Orthoptera          | Simple                      | Chewing                   |
| 79. | Robber Fly  | Diptera             | Complete                    | Sucking                   |
| 80. | Scorpionfly   | Mecoptera           | Complete                    | Chewing                   |
| 81. | Soldier Beetle                                      | Coleoptera          | Complete                    | Chewing                   |
| 82. | Southern Corn Rootworm<br>(Spotted Cucumber Beetle) | Coleoptera          | Complete                    | Chewing                   |
| 83. | Squash Bug  | Hemiptera           | Simple                      | Sucking                   |
| 84. | Stonefly  | Plecoptera          | Simple                      | Chewing                   |
| 85. | Syrphid Fly<br>(Flower Fly)                         | Diptera             | Complete                    | Sucking                   |
| 86. | Tachinid Fly  | Diptera             | Complete                    | Sucking                   |
| 87. | Tarnished Plant Bug                                 | Hemiptera           | Simple                      | Sucking                   |

|      | <b><u>Insect</u></b>        | <b><u>Order</u></b> | <b><u>Metamorphosis</u></b> | <b><u>Mouth Parts</u></b> |
|------|-----------------------------|---------------------|-----------------------------|---------------------------|
| 88.  | Termite                     | Isoptera            | Simple                      | Chewing                   |
| 89.  | Thrips                      | Thysanoptera        | Complete                    | Sucking                   |
| 90.  | Tiger Beetle                | Coleoptera          | Complete                    | Chewing                   |
| 91.  | Tiger Moth                  | Lepidoptera         | Complete                    | Sucking                   |
| 92.  | Tiger Swallowtail Butterfly | Lepidoptera         | Complete                    | Sucking                   |
| 93.  | Tobacco Hornworm Moth       | Lepidoptera         | Complete                    | Sucking                   |
| 94.  | Treehopper                  | Homoptera           | Simple                      | Sucking                   |
| 95.  | True Armyworm Moth          | Lepidoptera         | Complete                    | Sucking                   |
| 96.  | Underwing Moth              | Lepidoptera         | Complete                    | Sucking                   |
| 97.  | Velvet Ant                  | Hymenoptera         | Complete                    | Chewing                   |
| 98.  | Viceroy Butterfly           | Lepidoptera         | Complete                    | Sucking                   |
| 99.  | Walkingstick                | Orthoptera          | Simple                      | Chewing                   |
| 100. | Water Strider               | Hemiptera           | Simple                      | Sucking                   |
| 101. | Western Corn Rootworm       | Coleoptera          | Complete                    | Chewing                   |
| 102. | White-lined Sphinx          | Lepidoptera         | Complete                    | Sucking                   |
| 103. | Whitefly                    | Homoptera           | Simple                      | Sucking                   |
| 104. | Yellowjacket                | Hymenoptera         | Complete                    | Chewing                   |

# FFA Entomology Contest Insect Identification List

FORM 50B

## COMMON NAME

- |  |                                 |   |
|--|---------------------------------|---|
| 1. Alfalfa Butterfly                           | 35. European Corn Borer Moth    | 70. Monarch Butterfly                                   |
| 2. Alfalfa Weevil                              | 36. Field Cricket               | 71. Mosquito  |
| 3. American Cockroach                          | 37. Flea                        | 72. Moth fly  |
| 4. Ant   | 38. Flea Beetle                 | 73. Mud Dauber Wasp                                     |
| 5. Assassin Bug                                | 39. Flour Beetle                | 74. Northern Corn Rootworm                              |
| 6. Bagworm Larvae (in bag)                     | 40. Forage Looper Moth          | 75. Oriental Cockroach                                  |
| 7. Baldfaced Hornet                            | 41. German Cockroach            | 76. Pea Aphid   |
| 8. Bean Leaf Beetle                            | 42. Giant Water Bug             | 77. Peachtree Borer Moth                                |
| 9. Black Cutworm Moth                          | 43. Green Bottle Fly            | 78. Praying Mantis                                      |
| 10. Blister Beetle                             | 44. Green June Beetle           | 79. Robber Fly  |
| 11. Boxelder Bug                               | 45. Green Lacewing              | 80. Scorpionfly   |
| 12. Brown Stink Bug                            | 46. Green Stink Bug             | 81. Soldier Beetle                                      |
| 13. Buckeye Butterfly                          | 47. Ground Beetle               | 82. Southern Corn Rootworm<br>(Spotted Cucumber Beetle) |
| 14. Bumble Bee                                 | 48. Harlequin Bug               | 83. Squash Bug  |
| 15. Cabbage Butterfly                          | 49. Hog Louse                   | 84. Stonefly  |
| 16. Cabbage Looper                             | 50. Honey Bee                   | 85. Syrphid Fly (Flower Fly)                            |
| 17. Caddisfly                                  | 51. Horntail                    | 86. Tachinid Fly  |
| 18. Camel Cricket                              | 52. Horse Fly                   | 87. Tarnished Plant Bug                                 |
| 19. Carpenter Bee                              | 53. House Fly                   | 88. Termite   |
| 20. Carpet Beetle                              | 54. Ichneumon Wasp              | 89. Thrips  |
| 21. Carrion Beetle                             | 55. Indian Meal Moth            | 90. Tiger Beetle  |
| 22. Chinch Bug                                 | 56. Japanese Beetle             | 91. Tiger Moth  |
| 23. Cicada                                     | 57. Lace Bug                    | 92. Tiger Swallowtail Butterfly                         |
| 24. Click Beetle                               | 58. Ladybird Beetle             | 93. Tobacco Hornworm Moth                               |
| 25. Codling Moth                               | 59. Leafhopper                  | 94. Treehopper  |
| 26. Colorado Potato Beetle                     | 60. Lightningbug (Firefly)      | 95. True Armyworm Moth                                  |
| 27. Corn Earworm Moth                          | 61. Long-horned Beetle          | 96. Underwing Moth                                      |
| 28. Damsel Bug                                 | 62. Long-horned Grasshopper     | 97. Velvet Ant  |
| 29. Damselfly                                  | 63. Luna Moth                   | 98. Viceroy Butterfly                                   |
| 30. Differential Grasshopper<br>(Short-horned) | 64. Mayfly                      | 99. Walkingstick  |
| 31. Dobsonfly                                  | 65. Mealybug                    | 100. Water Strider                                      |
| 32. Dragonfly                                  | 66. Metallic Wood-boring Beetle | 101. Western Corn Rootworm                              |
| 33. Earwig                                     | 67. Mexican Bean Beetle         | 102. White-lined Sphinx                                 |
| 34. Elm Leaf Beetle                            | 68. Minute Pirate Bug           | 103. Whitefly   |
|  | 69. Mole Cricket                | 104. Yellowjacket                                       |

| INSECT ORDERS    |                |                 | METAMORPHOSIS      |
|------------------|----------------|-----------------|--------------------|
| A. Anoplura      | G. Homoptera   | N. Orthoptera   | Simple<br>Complete |
| B. Coleoptera    | H. Hymenoptera | O. Plecoptera   |                    |
| C. Dermaptera    | I. Isoptera    | P. Siphonaptera | MOUTH PARTS        |
| D. Diptera       | J. Lepidoptera | Q. Thysanoptera |                    |
| E. Ephemeroptera | K. Mecoptera   | R. Trichoptera  | Sucking            |
| F. Hemiptera     | L. Neuroptera  |                 | Chewing            |
|                  | M. Odonata     |                 |                    |

Name: \_\_\_\_\_ Contestant No: \_\_\_\_\_ School: \_\_\_\_\_

**Directions:** Enter the correct Common Name number and Order letter in the appropriate column. Darken the circle of the correct Metamorphosis and Mouth Parts letter in the appropriate column (make all entries LEGIBLE).

|     | Common<br>Name<br>Number | O<br>r<br>d<br>e<br>r | Metamorphosis           |                         | Mouth Parts             |                         |     | Common<br>Name<br>Number | O<br>r<br>d<br>e<br>r | Metamorphosis           |                         | Mouth Parts             |                         |
|-----|--------------------------|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----|--------------------------|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|     |                          |                       | Simple                  | Complete                | Sucking                 | Chewing                 |     |                          |                       | Simple                  | Complete                | Sucking                 | Chewing                 |
|     |                          |                       | S                       | C                       | S                       | C                       |     |                          |                       | S                       | C                       | S                       | C                       |
| 1.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 21. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 2.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 22. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 3.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 23. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 4.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 24. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 5.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 25. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 6.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 26. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 7.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 27. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 8.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 28. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 9.  |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 29. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 10. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 30. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 11. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 31. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 12. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 32. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 13. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 33. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 14. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 34. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 15. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 35. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 16. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 36. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 17. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 37. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 18. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 38. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 19. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 39. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |
| 20. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C | 40. |                          |                       | <input type="radio"/> S | <input type="radio"/> C | <input type="radio"/> S | <input type="radio"/> C |